

NATIONAL WEATHER SERVICE CENTRAL REGION SUPPLEMENT 02-2002

APPLICABLE TO NWSI 10-922

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Operations and Services

Hydrologic Services Program, NWSPD 10-9

Weather Forecast Office Hydrologic Products Specification, NWSI 10-922

WEATHER FORECAST OFFICE HYDROLOGIC PRODUCTS

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SUMMARY OF REVISIONS: This supplement supersedes NWS Central Region Supplement 02-2002, dated February 12, 2003. The following revisions were made to this supplement:

- 1) Provided Outlook, Watch, and Warning issuance guidance in terms of probabilities.
 - 2) Defined difference between Hazardous Weather Outlook and Hydrologic Outlook with respect to hydrologic content.
 - 3) Provided guidance for use of NWR-SAME codes in Flood Watches.
 - 4) Provided decision tree flowcharts for issuing hydrologic outlooks, watches and warnings.
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February 2, 2004
Date

Weather Forecast Office Hydrologic Products

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1. Introduction. The purpose of this supplement is to provide additional instructions pertaining to Central Region Weather Forecast Office hydrologic products, which are not addressed in NWSI 10-922; and to provide guidance on the types of hydrologic products to issue under various circumstances.

2. Outlooks, Watches and Warnings. The National Weather Service uses outlooks, watches and warnings to convey the severity and timing of a forecast hazard, as well as impart a certain level of confidence to the occurrence of that hazard. Flood and Flash Flood Warnings convey a high degree of confidence, Flood Watches a medium degree of confidence and Hydrologic Outlooks a lower confidence. The level of confidence typically decreases the further in time a forecast is projected. This is reflected in the suggested time periods for which to issue some of the products (e.g., Hydrologic Outlooks beyond 36 hours of the event occurring, Flood Watches typically 12-36 hours prior to the event).

WFOs should strive to issue products in the outlook, watch, warning order. Since the possibility for flooding as stated in Hydrologic Outlooks and Flood Watches is lower than for Flood and Flash Flood Warnings, it is not certain that a warning will always follow an outlook and/or a watch. When issuing hydrologic products, the use of confidence levels should be similar to those used in other NWS Outlook/Watch/Warning products:

- issue a Hydrologic Outlook for a 30 %-50% chance of flooding,
- issue a Flood Watch for a 50-80% chance of flooding,
- issue a Flood or Flash Flood Warning for an 80% chance or greater.

A warning may be issued at any time without a prior outlook or watch when a high level of confidence exists, or flooding is already occurring. Generalized information should be included

in the Hazardous Weather Outlook (HWO) when there is any chance of flooding through the next seven days.

3. Universal Geographic Code (UGC). Weather Forecast Office hydrologic products will contain a UGC (reference NWSI 10-1702). Hydrologic products and UGC type (county or zone) are listed in NWSI 10-922. Table 1, below, specifies UGCs that Central Region WFOs will use for those products which NWSI 10-922 leaves to regional discretion.

Table 1.

<u>Product Name</u>	<u>PID</u>	<u>UGC Type</u>
Hydrologic Outlook	ESF	county code
Hydrologic Statement	RVS	county code
Hydrologic Summary	RVA	county code
Daily River and Lake Summary	RVD	county code
Hydrometeorological Data Products	RRx*	county code
Hydrometeorological Data Summary	HYx	county code

* UGC for this product is not mandatory but if included, use the code listed.

4. Hydrologic Outlook (ESF) and Hazardous Weather Outlook (HWO).

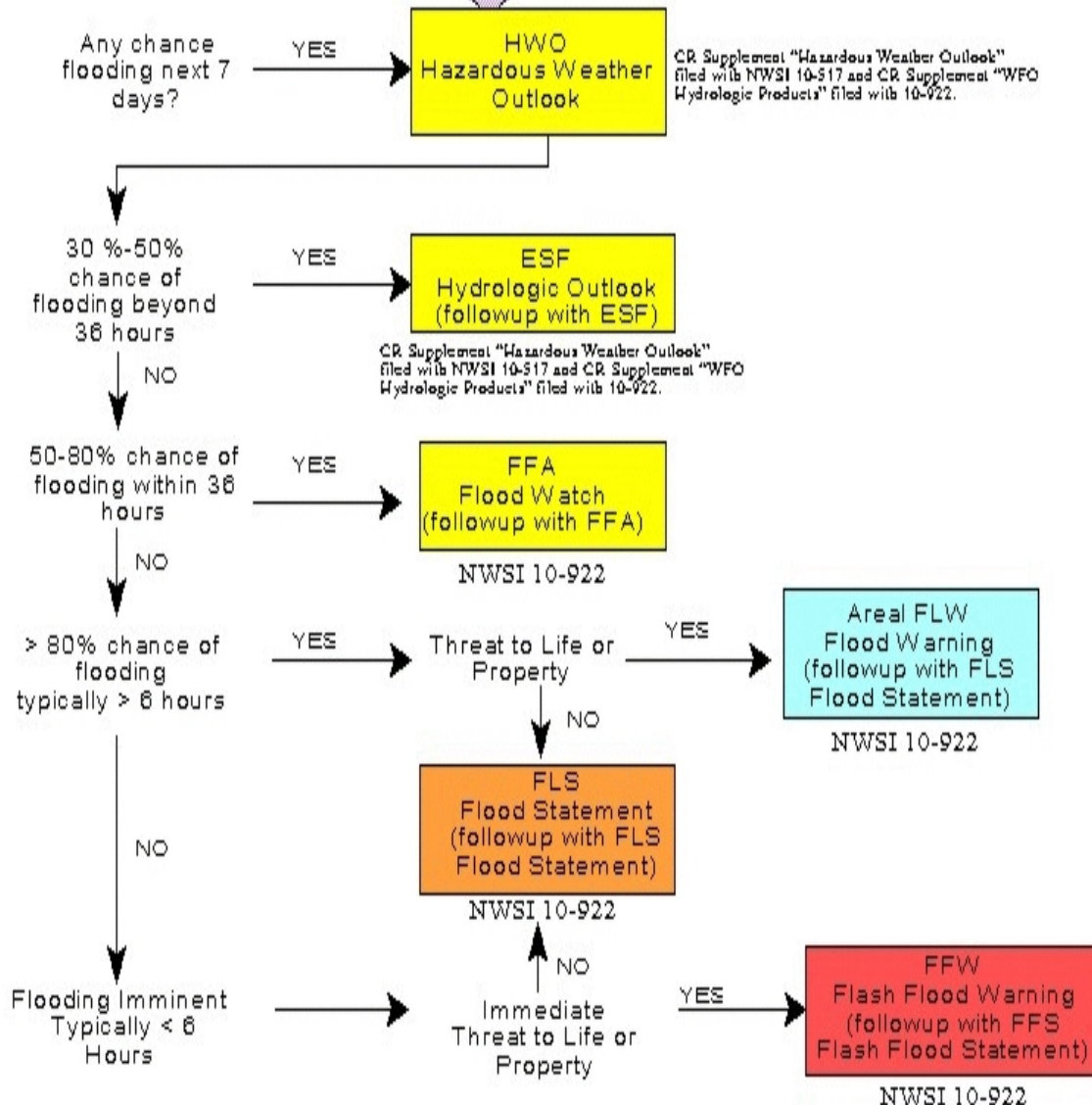
Hydrologic Outlooks (ESF) are issued to provide information on hydrometeorological conditions which could cause flooding beyond 36 hours (e.g., spring snowmelt outlook), affect water supply, or impact droughts. River Forecast Center (RFC) forecast guidance may be included in the ESF if available. Hazardous Weather Outlooks will also include information regarding any possibility of flooding through a 7-day period, but would be more general in nature.

5. Hydrologic Outlook (ESF) with Probabilistic Forecasts. Where probabilistic river forecasts are available, WFOs will issue text versions using the Hydrologic Outlook (ESF) product identifier and MND header. This product is typically issued once monthly following issuance of the Climate Prediction Center's monthly outlooks and subsequent River Forecast Center guidance. Event-driven updates may be issued depending on customer needs as well as RFC work load and computing issues. An example of a needed update would be if antecedent conditions changed which could change forecast probability values to levels that would cause customers and partners to modify mitigation plans.

6. Flood Watch (FFA) and NWR-SAME codes. There are two NWR-SAME codes available for Flood Watches: FFA and FLA (reference NWSI 10-1710). Use of SAME codes for flood watches is at WFO discretion. The FLA code may be used for all Flood Watches. The FFA code may be used when headlines include the possibility of flash flooding as required by customers.

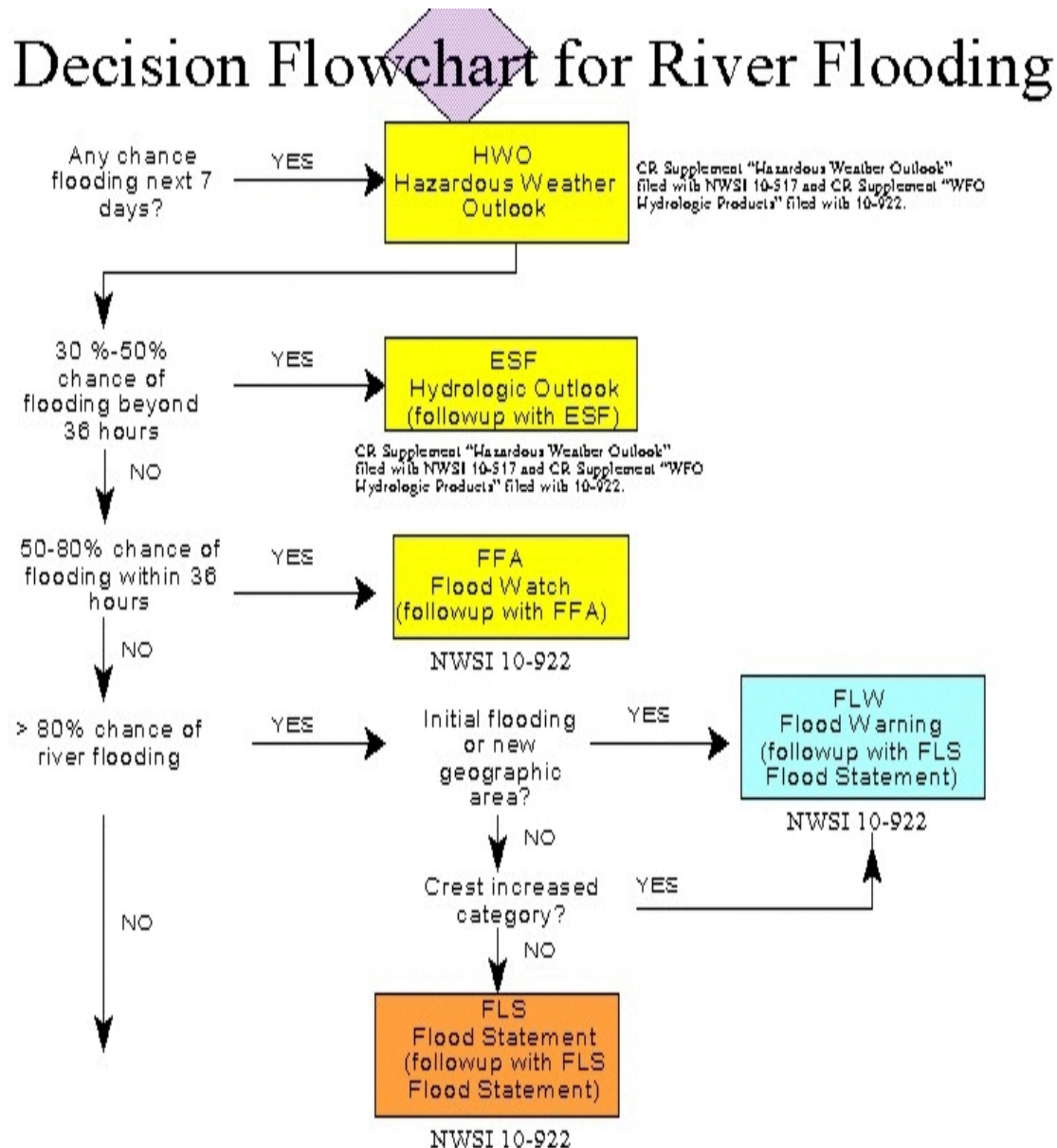
7. Decision Flowchart for Areal Flooding.

Decision Flowchart for Areal Flooding



- Hazardous Weather Outlook - HWO - any chance of flooding through 7 days
- Hydrologic Outlook - ESF - 30-50% chance of flooding beyond 36 hours
- Flood Watch - FFA - 50-80% chance of flooding within 36 hours
- Flood Warning - FLW - > 80% chance of flooding...typically more than 6 hours after causative event
- Flash Flood Warning - FFW - > 80% chance of flooding...typically within 6 hours of causative event ...immediate action needed to protect lives and property
- Flash Flood Statement - FFS - Supplemental information on flash flood warnings
- Flood Statement - FLS - Supplemental information on flood warnings; or information on elevated water levels which warrant public notification but not a warning

8. Decision Flowchart for River Flooding.



- Hazardous Weather Outlook - HWO - Any chance of flooding through 7 days
- Hydrologic Outlook - ESF - 30-50% chance of flooding beyond 36 hours
- Flood Watch - FFA - 50-80% chance of flooding within 36 hours
- Flood Warning - FLW - > 80% chance of flooding...typically occur more than 6 hours after causative event
- Flood Statement - FLS - Supplemental information on flood warnings; or information on elevated water levels which warrant public notification but not a warning